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Dr. David G. Williams

Some of the natural compounds work temporarily, but primarily just indoors. Exposure to sunlight, rain, high humidity, et cetera, renders the natural compounds ineffective in the yard and practically anywhere else outside. And if you don't eliminate these buggers outside, they'll soon find their way into your home.

Their aggressiveness makes them far more than just a typical household pest. They cause severe stings and they attack in large numbers. It is often hard for young children and the elderly to stop the attacks quickly enough to avoid allergic reactions or even death.

I guess what I'm trying to say is that I understand why the gentleman was using the pesticide. What concerned me was the fact that he was using his bare hands to spread the chemical.

Danger in a Five-Pound Bag

Lawn, garden, and household chemicals have become so commonplace and easy to obtain that their dangers are often overlooked. Much like other chemicals we talk about frequently (i.e., drugs), pesticides can cause serious health problems that might not rear their ugly heads until years or even decades later. In other words, it's highly likely that you wouldn't notice any ill effects from the pesticide you're exposed to today. However, in 5, 10, or 15 years, the cancer you "develop," or the Parkinson's disease, or other neurological problem that shows up, may be the direct result of such exposure.

Proving these relationships through research is difficult, which probably doesn't bother the chemical compa-

Kill the Bugs, Keep Your Brain

I was driving through town the other day and noticed a gentleman spreading fire ant poison in his yard. Fire ants have become a huge problem throughout the South and, unfortunately, there really isn't any effective way to control them without pesticides.

nies in the least. They would be flooded with lawsuits if direct links could be made between these chemicals and various health problems. While there are no direct studies, relationship studies continue to point out the dangers of pesticide exposure.

One recent study looked at 3,000 people in Italy, Scotland, Sweden, and Romania, of which 767 had Parkinson's disease. Their average age was only 62.

The researchers focused their questioning on the use of pesticides and found that low users like gardeners were nine percent more likely to develop Parkinson's than non-users—and high-exposure users, such as farmers, were 43 percent more likely. (*Scand J Work Environ Health* 04;30(3):241–248)

A more recent US study examined the relationship between Parkinson's and pesticide use in over 143,000 individuals. Those reporting exposure to pesticides were found to have a 70 percent higher incidence of Parkinson's than those without exposure. There was no increased risk of the disease associated with exposure to asbestos, chemicals/acids/solvents, coal or stone dust, or eight other occupational exposures that are known to cause other health problems. (*Ann Neurol* 06;60(2):188–196)



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You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on.—Benjamin Franklin

It appears that even some of the "natural" pesticides might cause the same problems. Rotenone is one such product marketed as an organic pesticide. It is derived from the root of tropical plants and is used primarily as an insecticide and fish poison. There are indications it was dumped in waterways as early as the 1600s in South America to paralyze fish so they could be easily netted.

Rotenone works like many synthetic pesticides by blocking the conduction of nerve impulses. *Like many pesticides it may be even more toxic when inhaled than when ingested.* (For the record, I think herbicides are just as bad as pesticides. Plants don't have nervous systems, so weed-killers use different types of chemicals, but the effects can be just as devastating to your health.)

To put this information in perspective, a family history of Parkinson's elevates your risk by 350 percent. (I think we'll eventually discover that some people are genetically equipped to break down and/or neutralize pesticides better than others. Those without this ability are most likely to develop Parkinson's, ALS, and other neurological disorders when exposed to such chemicals.)

Also, being knocked unconscious increases your risk by 32 percent—and as high as 174 percent if you've been knocked out on several occasions. (Multiple blows without being knocked out are also trouble. Consider Muhammad Ali.)

Looking at these other associated factors for Parkinson's disease, some people might assume the risk from pesticide use is small. If you believe that, then visit someone with Parkinson's. I think you'll quickly come to the conclusion that practically anything you can do to prevent Parkinson's is worthwhile. You may not be able to alter your genetic makeup, but you can easily take simple steps to avoid contact with and inhalation of pesticides.

Your local garden store carries a wide variety of products that contain neem oil, boric acid, or diatomaceous earth—all of which work well (though not against fire ants, I'm afraid). I've had good luck using products from Bioganic, www.biconet.com/bioganic or 800-441-2847. You don't need to leave your garden at the mercy of aphids and tomato worms.



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Dr. Williams works closely with Mountain Home Nutritionals, a division of Doctors' Preferred, LLC and subsidiary of Healthy Directions, LLC, developing his unique formulations that supply many of the hard-to-find nutrients he recommends. Dr. Williams is compensated by Doctors' Preferred, LLC on the sales of these nutritional supplements and health products, which allows him to continue devoting his life to worldwide research and the development of innovative, effective health solutions.

Macular Salvation

I've discussed macular degeneration numerous times in the past, and I've outlined detailed nutritional programs and various therapies that have been shown to be effective at both prevention and treatment. It's certainly not a new topic to *Alternatives* readers. Almost 20 years ago, I predicted macular degeneration would become a very serious health problem in this country. It continues to be the leading cause of blindness among older Americans. (Diabetic retinopathy is the leading cause of blindness in working-age Americans.)

As part of the never-ending quest to find "affordable" cures for this blinding disease, one company has recently made news that probably won't get much airtime.

The company, Genentech, makes an anti-cancer drug called Avastin that is used to treat colorectal cancer. In an attempt to cut off the blood supply to the tumor, Avastin helps stop new blood vessel formation (angiogenesis). High-quality shark cartilage works in much the same way. However, Avastin comes with side effects and increases the patient's risk of stroke and heart attack.

Some doctors reasoned that Avastin might be effective in patients with the wet form of macular degeneration (the form that leads to rapid visual impairment and blindness), because the damage comes from tiny blood vessels growing into the retina. They found that injecting tiny quantities of the drug often had a very quick and remarkable effect. News of the drug's success spread quickly by word of mouth, and it has reportedly been used successfully in over 7,000 eyes.

Dr. Philip Rosenfeld, with the Bascom Palmer Eye Institute of the University of Miami Miller School of Medicine, has used the drug on over 250 patients—without the side effects and increased health risks of the larger doses used for cancer treatment. It's not a total cure, and it's not for every patient with wet macular degeneration, but many who have been given the drug have gotten their sight back with just one or two injections.

What made this "off-label" use even better was the fact that an expensive vial of the anti-cancer drug could be split



NEWS TO USE FROM AROUND THE WORLD

Stamina Straight From the Gut

NEWCASTLE, AUSTRALIA—Doctors at the University here have found that probiotics can be an effective way to fight fatigue in athletes.

Blood and saliva chemistries were taken for one month in eight athletes who had fatigue and declining performance. All were shown to have a reduced secretion of interferon, and most were found to be infected with the Epstein-Barr virus (EBV). When the athletes were given a probiotic supplement (*Lactobacillus acidophilus*) for a month, not only did their interferon levels improve to levels found in healthy individuals, but only one was found to exhibit EBV shedding in the saliva. Also, the fatigue disappeared and athletic performance was noticeably improved. (*Brit J Sports Med* 06;40(4):351–354)

This study demonstrates what I've been discussing for some time now. The workings of your lower bowel are a crucial part of your overall immune system. Restoring bacterial flora to optimal levels can have a profound effect on your overall energy level and health. The Epstein-Barr virus is associated with chronic fatigue syndrome, and studies have shown that interferon helps keep the virus in check in healthy individuals. The regular use of a good probiotic supplement is one of the easiest and least expensive ways to improve interferon levels. This, in turn, often becomes a very effective tool for managing problems involving chronic fatigue.

On a related note, researchers in New Zealand have found that probiotic supplementation can significantly

into many, many doses and used on dozens of patients. What looked like a win-win situation for everyone apparently didn't make Genentech too happy.

Genentech declined to apply for a license to use Avastin for this purpose. Instead, they received approval to market a fragment of Avastin (which they named Lucentis), that they could package in the tiny doses suitable for eyes—at a higher cost. When the doctors split the larger vial, the cost of a dose was in the neighborhood of \$18. With a new name and packaging, the speculation is that a single dose of Lucentis will now run about \$1,800. Dr. Rosenfeld and other doctors around the country have commented publicly that the pharmaceutical company's actions were based strictly on greed and a quick way to increase profits rather than a matter of safety. No kidding.

What's Behind the Spot

Despite the ever-growing threat of macular degeneration, there really hasn't been much in the way of a

improve atopic dermatitis (skin eruptions and inflammation) in children with food allergies. (*Clin Exp Allergy* 06;36(5):629–633)

Probiotics, which our ancestors consumed regularly in the form of fermented foods, are a natural solution to many modern health complaints.

More on Nuts and Your Heart

SANLIURFA, TURKEY—Researchers at Harran University discovered that you can dramatically increase your levels of HDL cholesterol (the "good" form of cholesterol) by eating pistachio nuts.

When 24 healthy men and 20 healthy women consumed 20 percent of their daily caloric intake in pistachio nuts for three weeks, their total cholesterol levels improved, triglyceride levels dropped, and HDL levels increased by a remarkable 26 percent. (*Nutr Metab Cardiovasc Dis* 06;16(3):202–209)

A 26 percent increase in HDL levels after only three weeks is amazing. I guess it's also amazing that people could eat 20 percent of their total calories in pistachio nuts for three weeks. The marketing phrase "I bet you can't eat just one" wasn't written with pistachios in mind, but it sure does apply here. It's impossible to eat just one of those.

Decades of research continue to show that nuts stand out as the undisputed powerhouses in nutrition. They pack so much nutritional value in such small packages. They truly are one of God's gifts to Man.

prevention campaign. I'm sure that's because prevention primarily involves dietary changes and drug avoidance rather than increased medication.

It's no surprise that we're seeing more cases of macular degeneration. Studies have shown that a diet high in refined carbohydrates (sugar) increases the risk. (*Am J Clin Nutr* 06;83(4):880–886)

It's also suspected that "fat blockers" and certain cholesterol-lowering drugs that disrupt fatty acid levels and deplete various antioxidants are also contributing to the problem. Smoking will also increase the risk, and studies from Australia strongly indicate that vegetable oil consumption could be another leading culprit.

The Dark Side of Vegetables

Dr. Paul Beaumont in Australia discovered that individuals who consumed vegetable oil (corn, soybean, sunflower, et cetera) had twice the risk of macular degeneration. (*Macular Degeneration* continued on page 109)

POP, POP, FIZZLE, FIZZLE

Question: I have a problem with heartburn. I'm normally fine during the day, but after I lie down at night I'll get what my doctor calls acid reflux. I've tried all of the natural treatments that I'm aware of (not eating before bedtime, plenty of water, elevating the head of my bed, et cetera) but haven't had much luck. My doctor wants me to take medication that I've also tried before, again without much luck. I'm at wit's end. Do you have any possible suggestions?

Claire H.
Calexico, California

Answer: A few additional items come to mind. First, carbonated soft drinks could be contributing to the problem.

I'm not a big fan of soft drinks as it is. As "refreshing" and harmless as they may seem, their widespread consumption has been a major contributing factor to the obesity problem and increases in diabetes, osteoporosis, hyperactivity in children, gastric reflux, and even esophageal cancer.

In one study, doctors evaluated the sleeping habits of over 15,000 individuals from various parts of the country. Almost 25 percent of those surveyed reported they experienced nighttime heartburn, which was defined as being awakened at night two or more times a month due to heartburn. Further investigation revealed that increased nighttime heartburn episodes were strongly associated with drinking carbonated soft drinks, either alone or in conjunction with taking prescription anti-anxiety drugs (which are often used as sleep aids), including Xanax and Valium. (*Chest* 05;127:1658–1666)

Researchers at the Tata Memorial Hospital in India have linked the rise in consumption of carbonated soft drinks in the US with the corresponding increase in esophageal cancer. Soft drink consumption in the US has risen more than 450 percent, from 10.8 gallons per person in 1946 to 49.2 gallons per person as of the year 2000. During the past 25 years, the rate of esophageal cancer in the US has increased more than 570 percent. (*J Natl Cancer Inst* 06;98(9):644–645)

In regards to increasing esophageal damage, soft drinks do two things. First, the carbonation increases stomach distention. If you drank a pint of water, your stomach would distend by a pint. If you drank a pint of carbonated soda, however, your stomach might distend to twice that size, the size of a quart. This increased distension can cause the reflux where the acid within the stomach is forced back into the esophagus.

Second, carbonated sodas are acidic themselves. Studies have shown that consuming approximately one

can of soda (350 mL) increases the acid level in the stomach for a period of 53.5 minutes. Just drinking one can of soda a day would subject your stomach to over 19,500 more minutes of acid exposure every year. Most people who drink sodas, however, drink more than a single can a day. (If you drink more than one soda a day, I'll let you do the math.)



It's also noteworthy that 56 percent of eight-year-olds consume soft drinks daily—and it has become the number-one breakfast beverage among children. A third of teenage boys drink at least three cans a day. In fact, studies have shown that adolescents now get an average of 11 percent of their total daily calories from soft drinks.

I'm sure there are some people who would argue that there is no hard proof that increased carbonated soft drink consumption is directly linked to esophageal cancer. After all, during the last 25 years, the amount of time spent watching television has also increased but that doesn't mean watching TV causes esophageal cancer. However, with soft drinks, the necessary connection is there (significantly increased acid exposure). Additionally, the same trend seen here in the US is beginning to appear worldwide. In countries where annual soda consumption is below 10 gallons per capita (China, Eastern Europe, Korea, India, Taiwan, and others), the incidence of esophageal cancer has not increased. In other countries, as the yearly consumption increases to more than 20 gallons per capita, there is a noticeable trend toward increased esophageal cancer rates.

I almost forgot I was answering your question, Claire. I sort of jumped on my soapbox and started ranting and raving about the dangers of sodas. Unfortunately, I think it's a major problem that is being overlooked. I hope this information will not only help you with your nighttime heartburn but also provide the necessary incentive to help some others kick the carbonated soda habit.

If you're not a soda drinker, there are a couple other things you might try. First, if you have been experiencing other digestive troubles—a feeling of fullness after eating only a few bites, or a tendency to burp—you may be looking at a hiatal hernia. One of the classic signs is that your symptoms get worse when you lie down. Instructions for dealing with hiatal hernia are in *Alternatives*, Vol. 11, No. 6.

The earlier study involving Xanax and Valium brings up another point of interest I should probably address.

(Mailbox continued)

Both drugs can have serious side effects. The drug companies even openly admit they don't fully understand how these drugs work on the human body.

Instead of resorting to sleep aids, people are better off relying on the body's mechanisms. Melatonin helps induce sleep, as you know. The pathway for making melatonin is as follows: the amino acid tryptophan is converted to serotonin, which is converted to melatonin. This process is why taking tryptophan helps induce relaxation and sleep (and why you feel so sleepy after Thanksgiving dinner—turkey is one of the richest sources of tryptophan). Eating just before lying down to sleep in the evening isn't recommended, so a

turkey sandwich is out of the question. A good alternative is a handful (an ounce or so) of walnuts about 30 minutes before bedtime. Walnuts are also a good source of tryptophan (as well as vitamin E, which aids in the conversion of tryptophan to serotonin). Their beneficial fat content also promotes a feeling of well-being and satiety.

And sleep aids are only the tip of the medication iceberg. Aspirin is another noted culprit when it comes to heartburn, but other contributors include the rest of the NSAID family; calcium channel blockers and beta blockers used to treat high blood pressure; and bisphosphonates used for osteoporosis.

(*Macular Degeneration continued from page 107*)

tion as those who didn't. What was even more alarming was another study comparing the effects of consuming vegetable oil in individuals who already had the disease. Dr. Beaumont found *the disease in individuals consuming higher amounts of vegetable oil and vegetable oil products progressed at 3.8 times the rate of those eating little or no vegetable oil*. In Australia, Dr. Beaumont reports, there has been a tenfold increase in macular degeneration in the last 30 years (currently estimated at 800,000 individuals). In that country, the disease has actually overtaken diabetic retinopathy fivefold and is the leading cause of vision loss. In fact, two-thirds of those who become blind do so as a result of macular degeneration.

Dr. Beaumont feels that at least half those going blind in Australia due to macular degeneration could avoid the problem altogether simply by eliminating vegetable oil. The first thing he does with macular degeneration patients is get them completely off vegetable oils and foods that contain them (such as margarine). He has them cook only with olive oil.

At last year's meeting of the American Oil Chemists' Society, researchers explained how heating vegetable oils for just half an hour caused the formation of a compound called HNE (4-hydroxy-trans-2-nonenal). This compound becomes incorporated into the food being cooked and is easily absorbed when ingested.

Studies involving HNE show that it is related to the formation of numerous diseases—including atherosclerosis, Alzheimer's, Parkinson's, Huntington's, and liver disease. Those at this meeting highly recommended avoiding foods fried in vegetable oils—whether at home, eating out, or in commercially prepared foods.

Good Oil for Bad

In the mid-1960s there was a big push to switch from such saturated fats as butter, lard, coconut oil, and palm

oil to vegetable oils. (Margarine began to outsell butter as early as 1957.) At that time, macular degeneration wasn't a problem. In fact, most ophthalmology textbooks published as late as the 1980s barely mentioned it. Since that time, consumption of the saturated fats has leveled off and even dropped somewhat. The use of vegetable oil has increased dramatically. Practically every baby boomer born in the Western societies has been consuming vegetable oil-laced foods from infancy. And, with the commercial introduction of vegetable oil around the world, the problem is rapidly spreading almost everywhere. In Japan, the disease was practically unheard of 40 years ago—and now it's becoming a growing concern.

Even today, it's almost impossible to find a processed food that doesn't contain, or hasn't been prepared with, vegetable oil. For instance, some tuna is packed in vegetable oil. You'll also find it in bread, salad dressings, dips, cookies, crackers, and breaded foods. The list goes on and on. And the health problems related to vegetable oil consumption also go on and on. All the propaganda about "heart-healthy" vegetable oil has contributed, and continues to contribute, to millions of deaths and disabilities—macular degeneration among them.

If you value your eyesight (I don't know anyone who doesn't), then you need to work at eliminating or greatly minimizing your consumption of vegetable oil and related products. Macular degeneration is a horrendous disease. Within months, deteriorating vision can quickly rob you of your independence and ability to function normally. Blindness is often the end result. Even with the best medical treatments available, only about 10 percent are able to regain their vision. It's not worth the risk.

Throw out the vegetable oil. Avoid margarine like the plague. Switch to butter and olive, macadamia, and coconut oils. From the research I've done, even lard (if not overly processed) is a better option—particularly in cooking.

Scoping Out a Solution

The Avastin treatment I wrote about above is the only successful medical treatment that I'm aware of to deal with wet macular degeneration. [Editor's note: For a treatment for the more common "dry" form, see *The Test of Time* on page 111.] Changing nutritional habits is essential, and undoubtedly the best way yet to prevent the problem. Laser therapy is being tested as a way to slow its progression, but that has met with only limited success. For someone whose eyesight has already been destroyed from macular degeneration, a new implantable telescopic device appears to be one of the only solutions.

I normally don't discuss surgical procedures, but macular degeneration is such a big problem that I'm sure there are a lot of readers looking for any alternative available to restore their sight.

A company called VisionCare Ophthalmic Technologies has developed a miniature telescope containing two wide-angle micro-lenses. The device is surgically implanted to help provide a permanent solution to severe vision loss from macular degeneration. It's still undergoing clinical testing—but, from what I've seen, it can be a true godsend. The surgery is simple enough to be done on an outpatient basis, but patients do take several months to adjust to the device.

Macular degeneration destroys the central vision of the eye—and that doesn't return. The telescopic device, which comes in two different strengths, is implanted in only one eye. It enlarges images and projects them to other parts of the retina, which allows one to see objects much larger than normal. It would be like looking at an object through a telescope with the very central portion blocked out. It lets people see more with their remaining vision—which can greatly improve their quality of life.

If you want more information about upcoming clinical trials and details of when the device might be readily available, you can contact VisionCare Ophthalmic Technologies, Inc., 14395 Saratoga Ave, Ste. 150, Saratoga, California 95070 at 408-872-9393 or check out their Web site at www.VisionCareInc.net.

We're in the midst of a major epidemic of macular degeneration. However, for some reason, nobody in the medical establishment wants to talk about it. I certainly can't figure out why. It reminds me of the story of the employer chastising a new employee for his inexcusable work. He asked, "Is it ignorance or apathy?" and the employee replied, "I don't know and I don't care."

Macular degeneration is a disease that no one seems to care about. And, with the current attitude in this country, it will only continue to destroy more lives. Fifteen

million people in this country have the disease. One in every four people (25 percent) of those over 65 years of age have it, and one in three (33 percent) of those over 80. Don't wait for the announcement of the "big discovery" that vegetable oil and nutritional deficiencies are the cause of the disease. Don't become one of the victims.

Predicting the Physical Future

Over the years, I've had a pretty good track record when it comes to predicting health trends. All it takes is knowing what to look for. It's more difficult to predict what's in store for an individual, but again the task becomes easier if you know what to look for.

Researchers (and, no doubt, insurance companies) would love to be able to look at individuals and determine future health events with some certainty. Genetic testing offers some guidance, but, as I've said before, genes represent a predisposition—not a certainty.

Progress in Prognostication

The risk of falling is one area that has received a great deal of attention over the years. It's hard to determine who's at risk for falling among the elderly. Falls are a major problem because, for too many people, a broken hip is the beginning of the overall deterioration of health.

If there were some half-way accurate method of determining which individuals might be at risk for falling, a great deal of suffering could be prevented through the use of such products as walkers and hip protectors. (There are numerous hip protectors on the market. They resemble tight-fitting underwear with removable pads that protect the hip joint from the impact of a fall—reducing the risk of a fracture. As for walkers and canes, I highly recommend the devices from Orthotic Mobility Systems that I wrote about in November 2005.)

Researchers with the Department of Geriatric Medicine at Umea University in Sweden have reported on a very useful discovery concerning falls in the elderly. They observed that some elderly people stopped walking every time they started a conversation. Apparently, the two activities together require more attention and concentration than simply standing still and talking.

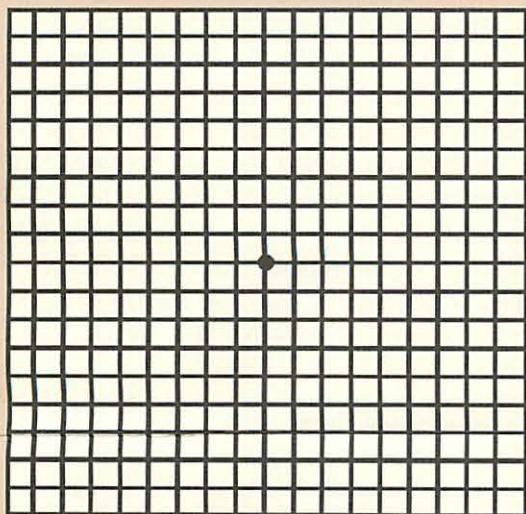
Based on this observation, they monitored 58 patients (12 of whom stopped walking when talking). The average age was 80, and 72 percent were women.

During the study's six-month period, 21 of the 58 patients fell (36 percent). There was a 90 percent chance of falling among those who stopped walking when they talked, and only a 24 percent fall rate in those

The Test of Time: Macular Degeneration

If you've been diagnosed as having dry macular degeneration, it is very important that you check your vision at home with either the Amsler Grid Test or any grid pattern.

Cover one eye at a time and look at the center point. If the lines appear straight, the macula is normal. Wavy lines or blurred vision are the early signs of macular degeneration. A later sign is a blind spot in the center of your visual field.



If you already have macular degeneration, all is not lost. Research out of the Indiana University School of Optometry shows that a comprehensive blend of antioxidants and amino acids can stop the progress of the condition.

In addition to using nutrients, some patients have seen success with micro-current electricity using a common transcutaneous electrical nerve stimulator (TENS) device. The use of the TENS unit seems

who had no difficulty talking while walking. (*Lancet* 97;349(9052):617)

Obviously, this was a small study and there would be dozens of ways to challenge the results. And most might feel it has little significance. I personally think the results are very useful and wish more studies of this type would be undertaken.

Here's a simple, free test that can be used to help predict which individuals might need some support or extra protection from falls. If you have an elderly family member or friend and notice that he or she needs to stop walking

to be one of the primary reasons for the dramatic improvements seen in many AMD patients.

The TENS units operate on 9 volts with an output of 200 microamperes at 10 cycles per second (Hz). Each unit transmits electricity through two electrodes—one held in the patient's wet hand and the other gently placed on a closed wet eyelid. (When the unit is turned on, a slight flicker of the eyelid indicates that the electricity is reaching the retina.) If the TENS unit is to be used strictly for retinal stimulation, one of the electrode pads can be removed and the wire soldered to a small piece of copper tubing, which can then be held in the patient's hand.

Each eye is stimulated for a total of five minutes. The small electrode is first placed on the wet upper eyelid of one eye for 2.5 minutes, then the wet lower eyelid for 2.5 minutes. The process is repeated on the other eye. The best results seem to occur when the eyes are treated several times a day. There have been no adverse effects noted through the use of the nutrients or the TENS units.

Standard TENS units are easy to come by, but the "micro-current" TENS units are a bit more specialized. One source is Altoona Medical Supply, which sells the 804MP micro-current model for about \$300. You can contact them at 800-442-8367, or through their Web site at www.AltoonaMedicalSupply.com.

You'll need a prescription from a doctor of chiropractic, optometry, or medicine. If your doctor is hesitant, ask him or her to contact the company for more information.

Tip from Vol. 8, March 2000

in order to carry on a conversation, I would consider this to be the "handwriting on the wall." By explaining these findings and helping the person obtain a walker, cane, or hip protector unit, you might be able to save them from the devastating effects of a hip fracture.

Bone Protection

I've discussed the need for vitamin D, calcium, vitamin K, and weight-bearing exercise to prevent bone loss and the resulting osteoporosis. A new study has also found that the fermented soybean product natto is effective at reducing bone loss in postmenopausal women.

The Japanese study found that women who ate more than four packs of natto per week had 80 percent less bone loss at the femoral neck and 60 percent less at the radius compared to women who didn't consume any natto. In Japan, natto is sold in 40-gram packs, each containing approximately 350 micrograms of vitamin K—so these women are getting at least 1,400 micrograms of vitamin K weekly. (*J Nutr* 06;136(5):1323–1328)

This latest study shows just another of the many reasons to include vitamin K as part of your regular supplement program. (At this point, I should mention that natto supplements, in the form of nattokinase, have had the vitamin K removed. For bone health, you'll need to rely on the food rather than the supplement.) [Editor's note: For a more complete article on the many benefits of natto and nattokinase please refer to Vol. 9, No. 17.]

Further Forecasting

In a related development, researchers with the University of Pittsburgh have come up with a result that wasn't too surprising. Older adults with poor overall strength were at higher risk of developing some sort of disability in the coming years. As part of the National Health, Aging, and Body Composition study, researchers tested the knee strength of 3,075 fully functioning men and women. Over the next two and a half years, more than 20 percent of the men and more than 30 percent of the women developed limited mobility—trouble walking a quarter mile or climbing a flight of ten steps. Those with the lowest knee strength at the beginning had twice the risk of becoming limited. (*J Gerontol A Biol Sci Med Sci* 05;60(3):324–333)

Poor muscle strength can even predict later disability as far as 25 years further on. Researchers in Hawaii tested the grip strength of more than 6,000 Japanese-American men, then tracked their subjects' health for the next 25 years. They found that the individuals with the lowest grip strength were nearly three times as likely to end up with difficulty walking. Poor grip at midlife doubled the risk of later difficulty with such self-care items as dressing and bathing. Grip strength also predicted the

later ability to do what the authors called "heavy housework"—such as raking leaves or cleaning out the garage. (*JAMA* 99;281(6):558–560)

The Strength to Resist Temptation

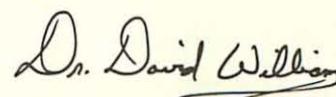
Another discovery from the Pittsburgh study is that diabetes affects muscle strength. In the original study group, 485 people had been diagnosed with type 2 diabetes. The men with diabetes had lower knee strength and grip strength than the men who didn't, and overall strength for the women was similar between the two groups. (*Diabetes* 06;55(6):1813–1818)

However, in a comparison of mass to strength, what the researchers called "muscle quality," those with diabetes came out far behind. People with diabetes tend to be overweight, and so need more muscle to move the greater bulk. The men with diabetes had about five percent more muscle, and the women had about 12 percent more. But the extra total weight, combined with the loss of muscle quality, meant that the people with diabetes had significantly more problems getting around. The longer a person had had diabetes, and the more trouble he or she had in controlling blood sugar levels, the worse the muscle problem became.

This new research shows that it's not just the quantity of muscle, but also the quality that counts. If you find yourself slowly losing the strength to do things you used to do, it's not too late to begin your own private rehab program.

I've written before about simple exercise programs you can do at home, but for some people even those basic activities can be difficult. [Editors note: See Vol. 10, No. 19] You may find that activities as simple as arm curls using a one-pound can of vegetables will provide you with enough of a challenge. Your goal isn't to get bulked up for a body-building competition, but just to stay independent and active your whole life.

Take care,



If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest.

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